

Mexican species of *Stachys* (Lamiaceae) revisited

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ABSTRACT

In my synoptical study of the Mexican and Central American *Stachys* (Turner 1994b), 38 species were recognized; two species were added by subsequent workers, *S. manantlanensis* B.L. Turner and *S. turneri* Rzed. & Calderon, these discussed herein. An additional two novelties are described from Mexico in the present paper: ***Stachys tamaulipana*** B.L. Turner, **sp. nov.**, from the states of Tamaulipas and Nuevo Leon, and ***Stachys tlaxiacana*** B.L. Turner, **sp. nov.**, from the state of Oaxaca; the former relates to the more northern *S. boraginoides*, the latter to the more southern *S. grahamii*; photographs of the holotypes are presented, along with maps showing their distribution.

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KEY WORDS: Lamiaceae, *Stachys*, *S. manantlanensis*, *S. turneri*, Mexico, Oaxaca, Nuevo Leon, Tamaulipas

As noted in the above abstract, two novelties were added to the Mexican species of ***Stachys*** following my synoptical treatment of the complex. Appropriate comments upon their status follow:

STACHYS MANANTLANENSIS B.L. Turner, *Phytologia* 78: 209. 1995.

As noted in the original description, this taxon belongs to the ***S. coccinea*** complex (Turner 1994a). In my synoptic treatment of the Mexican species of ***Stachys*** (Turner 1994a), it will key to ***S. pacifica*** B.L. Turner, but differs in habit (sprawling stems, rooting at the nodes) and corolla color, which was said to be “bright magenta to lilac” in my original description; at the time the following two collections were not available to me: *Iltis* 31124 (TEX), who described the corollas as “deep rose,” while *Iltis et al.* 29354 (TEX) describe the corollas as a “rich deep rose.”

STACHYS TURNERI Rzed. & Calderon, *Acta Bot. Mexicana* 32: 4. 1995.

As noted by its authors, this is a very distinct taxon, presumably confined to the state of Guanajuato, and presumably closely related to ***S. arriagana*** B.L. Turner and ***S. moorei*** B.L. Turner, all possessing pubescent nutlets, a relatively rare trait in the genus. The following key will distinguish the taxa concerned:

1. Stems and foliage densely pubescent with white villous hairs;
corolla tube annulate; Guanajuato.....***S. turneri***
1. Stems and foliage otherwise; corolla tubes lacking an annulus;
Hidalgo and San Luis Potosi...(2)
2. Calyx 6-7 mm long; corolla tubes pink, 5-9 mm long;
Hidalgo.....***S. moorei***
2. Calyx 9-10 mm long, corolla tubes lilac, 10-11 mm long; San Luis
Potosi.....***S. arriagana***

It should be noted, ashamedly, that in my synopsis of Mexican taxa (Turner 1945b), I keyed both ***S. arriagana*** and ***S. moorei*** as possessing annulate corolla tubes, although these were appropriately described as lacking an annulus in my original descriptions of the taxa. Fortunately, the authors of ***S. turneri*** correctly noted the error concerned.

Distribution of the several taxa is shown in Fig. 3.

My continued interest in the Mexican *Stachys* has revealed two additional novelties, as follows:

STACHYS TAMAULIPANA B.L. Turner, **sp. nov.** Fig. 1

Rhizomatous perennials, rooting at the nodes and forming large mats up to 30 cm high in wet places. **Mid-stems** pubescent with spreading hairs 1.5-2.0 mm long, beneath these, on uppermost stems, an array of minute, glandular, hairs. **Leaves** (at mid-stem) mostly 5-10 cm long, 3-4 cm wide; petioles 2-6 cm long; blades sub-cordate to cordate, sparsely pubescent above and below with hairs 1-2 mm long; margins with rounded serrations. **Inflorescence** a terminal bracteate raceme, 10-20 cm long; peduncles 5-15 cm long; bracts leaf-like, lanceolate, reflexed, 1-4 cm long, 0.2-1.0 cm wide. **Flowers** 4-6 to a node; pedicels 1-2 mm long, minutely, glandular-pubescent. **Calyces** (flowering) 5-6 mm long, minutely pubescent to nearly glabrous, the lobes lanceolate, 2-3 mm long. **Corollas** reportedly “pink (*Hinton 24613*)” or “deep purple (*Ferguson 7*);” tubes 6-8 mm long, having a well-defined annulus ca 3 mm from the base; lower lip 6-8 mm long; upper lip 3-4 mm long. **Anthers** purple, extending from the throat for ca 3 mm. **Nutlets** brown, 1.5-2.0 mm long, verrucose or somewhat warty (not smooth).

TYPE: MEXICO. TAMAULIPAS: Mpio. Hidalgo, “Arroyo Oscuro; along road to Dulces Nombres, Nuevo Leon; 2.0 road miles NE of Los Caballos towards Canada El Mimbres; 15.0 road mi from the lowermost crossing of arroyo El Mimbres; humid forest with *Carya* [et al.]” limestone soils, 1800 m, 23 59 09 N, 99 28 37 W, “forming extensive mats in wet rocks of intermittent stream,” 23 Sep 1994, *Mark H. Mayfield 2086* [with J. Hinton & G. Nesom] (Holotype: TEX).

ADDITIONAL SPECIMENS EXAMINED: MEXICO. NUEVO LEON; “CO/MPIO: cadereyta; 1.2 km SW of the junction with the main road from Cadereyta to Allende towards Santiago along the road through La Boca Canyon to Antiago in the Sierra La Silla in low lying areas; east of the Sierra La Silla;” occurring with *Taxodium*. “Dark clay soils. Common rhizomatous perennials; growing in roadside ditches; corolla deep purple.” 350 m, 14 Mar 1994, *Ferguson 7* (TEX). **TAMAULIPAS: Mpio. Hidalgo**, Los Caballos, 1700 m, 3 Aug 1994, *Hinton et al. 24613* (TEX).

The species is named for the state of Tamaulipas, whence the type.

In my treatment of Mexican *Stachys* (Turner 1994b), this species, because it lacks broad-based stem-hairs, will key to *S. pilosissima* Mart. & Gal.; at the time of that treatment, I possessed only one collection of the novelty from Tamaulipas (*Hinton et al. 24613*), this I positioned in the latter taxon, lacking detailed descriptive data, etc. Subsequent collections (cited above) strongly suggest that the taxon is undescribed, and perhaps closer to *S. boraginoides* Schlecht. & Cham., having a sprawling habit and relatively large annulate corollas, as well as large, somewhat verrucose, nutlets. While treated as a novelty here, it must be admitted that the taxon might with equal validity be treated as part of the fabric of an enlarged *S. boraginoides*. It differs from the latter, however, in several features, including vestiture (lack of broad-based hairs), lanceolate, reflexed flowering bracts (vs leaf-like and non-reflexed), shorter calyx lobes (2-3 mm long vs 3-5 mm), and distribution (Fig. 4).

STACHYS TLAXIACANA B.L. Turner, **sp. nov.** Fig. 2

Rhizomatous, erect, perennial herbs to 30 cm high. **Mid-stems**, mostly glandular-pubescent (setulose and eglandular near the base), the vestiture 0.3-0.5 mm high. **Leaves** (lower), 2-3 cm long, 1.0-1.5 cm wide; petioles 1-6 mm long; blades broadly lanceolate to sub-deltoid, appressed-pubescent above and below, the margins minutely serrate. **Inflorescence** a terminal interrupted, glandular-pubescent, spike ca 18 cm long, 3 cm wide; floral bracts broadly obovate, 3-5 mm long and as wide, glandular-pubescent mainly along the margins, their surfaces appressed-pubescent. **Flowers**, 4-6 to a node, the internodes ca 2 cm long. **Calyces** (flowering) 4-5 mm long, pubescent like the bracts; tubes ca 3 mm long, the lobes 1.5-

2.0 mm long. **Corollas** reportedly “purple;” tubes 7-8 mm long, having a well-defined annulus ca 2 mm above the base; upper lip ca 2 mm long; lower lip 3-5 mm long. **Anthers** purple, excurrent for ca 2 mm. **Nutlets**, smooth, brown, ovoid, ca 1.5 mm long, 1.0 mm wide.

TYPE: MEXICO. OAXACA. Distrito Tlaxiaco, “ca 10 mi N of San Miguel El Grande Slopes of Cerro Piedra de Olla. Pine, fir, on steep slopes and ridge[sic]. Rare in part shade under trees.” 2950 m, 97 33 W, 17 07 N, 3 Aug 1990, *J. A Soule* 2435 [with D.R.Brunner] (Holotype: TEX).

Stachys tlaxiacana will key to or near **S. grahamii** in the treatment of Turner (1994b); in addition to its distribution (Fig 5), it differs from the latter in being a stiffly erect small herb with glandular-pubescent stems (vs not so), having notably short calyx lobes (1.5-2.0 mm long vs 2-4 mm); especially noteworthy are the smaller, broadly obovate, glandular-pubescent floral bracts, such not found in **S. grahamii**.

The species name is derived from the Distrito Tlaxiaco, whence the type.

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My field companion, Jana Kos, edited the paper. Maps are based upon specimens on file at LL-TEX, and those included in the work of Turner (1994a,b).

LITERATURE CITED

- Turner, B.L. 1994a. Taxonomic study of the *Stachys coccinea* complex (Lamiaceae). *Phytologia* 76: 391-401.
- Turner, B.L. 1994b. Synopsis of Mexican and Central American species of *Stachys* (Lamiaceae). *Phytologia* 77: 338-377.

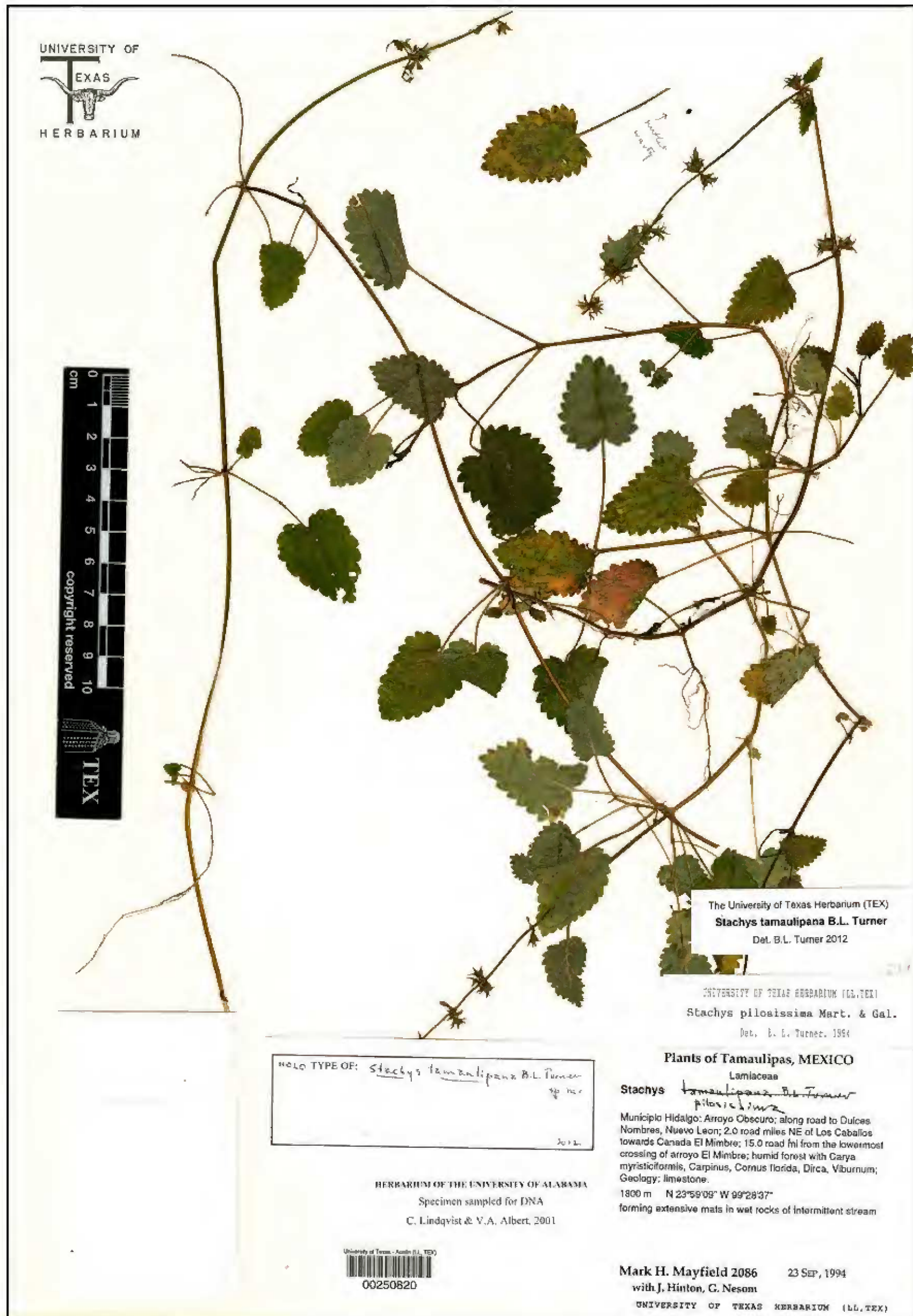


Fig. 1. Holotype of *Stachys tamaulipana* B.L. Turner (Holotype, TEX).



Fig. 2. Holotype of *Stachys tlaxiacana* B.L. Turner (Holotype, TEX).

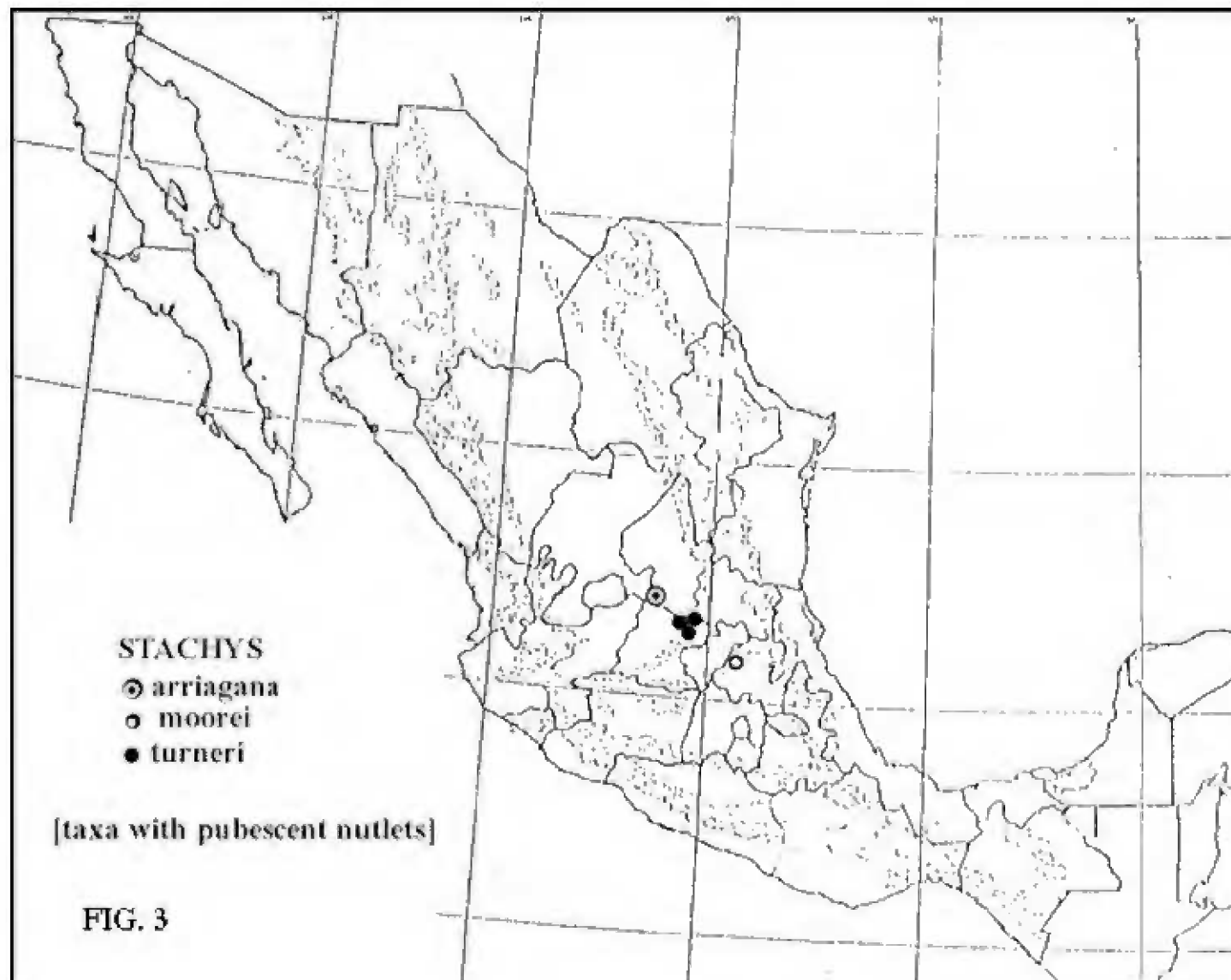


Fig. 3. Distribution of *Stachys turneri* complex.

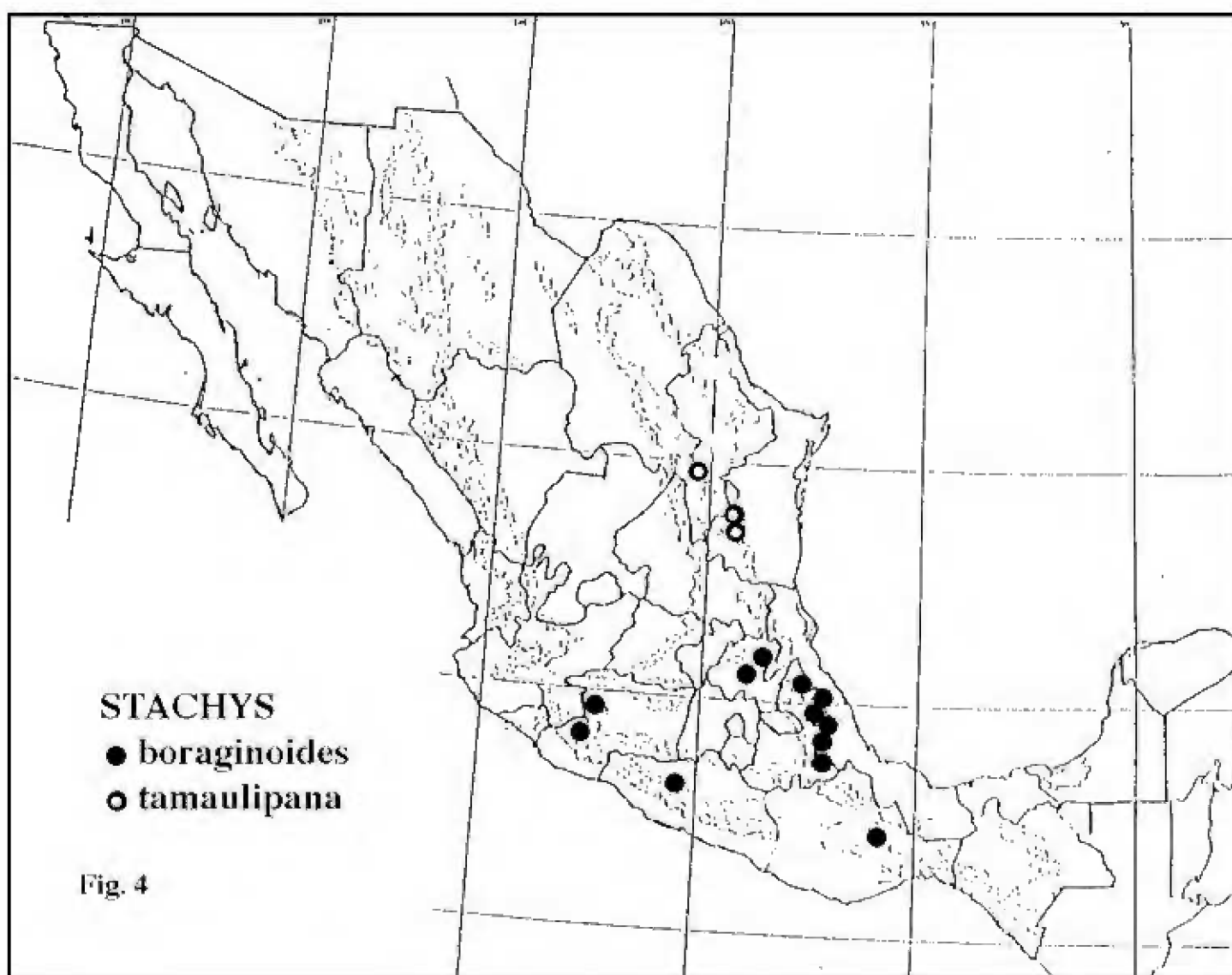


Fig. 4. Distribution of *Stachys tamaulipana* and *S. boraginoides*.

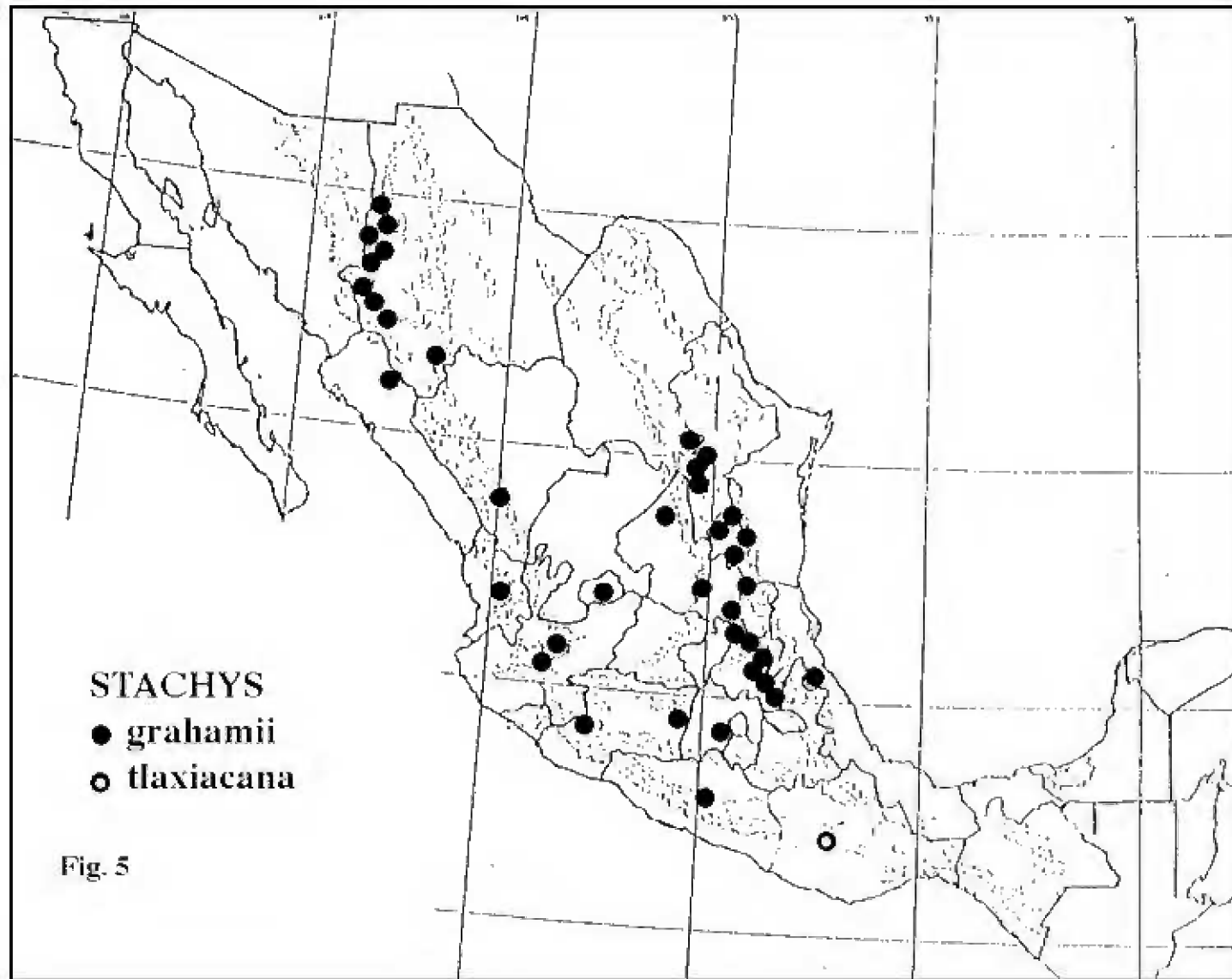


Fig. 5. Distribution of *Stachys tlaxiacana* and *S. grahamii*.